

**Applicants' Remarks**

The examiner's response includes two sections: (1) Claim rejections in view of 35 U.S.C. § 112; (2) Claim rejections in view of 35 U.S.C. § 102(e); (3) Claim rejections in view of 35 U.S.C. § 103(a); and (4) a double patenting Claim rejection in view of Claims 1-11 of U.S. Patent No. 6,567,705. Applicants respond below to each of these sections.

**(1) Claim Rejections under 35 USC § 112**

Claims 36-46 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Five separate rejections were made under 35 U.S.C. 112, second paragraph, which are addressed below:

(1) In regards to Claim 36, the Examiner found the phrase "a predetermined genetic material" is inferentially included in the claim, rendering the claim vague because it is unclear whether this element is a component of the claimed system. The Examiner has suggested to positively recite the element before further limiting it. The Examiner has indicated that the claims have been interpreted as containing the materials and should be amended according.

Applicants have amended claim 36 as suggested by the Examiner to positively recite the "implantable system for delivering genetic material or protein." Applicants thank the Examiner for his suggestion. In view of the submitted Amendment to Claim 36, Applicants respectfully request the present rejection under 35 U.S.C. 112, second paragraph, be removed.

(2) In regards to Claims 37 and 40, the apparatus claims were pointed out by the Examiner to recite method steps, rendering it unclear whether the claims are reciting a system or method.

Applicants have amended claims 37 and 40 to clearly indicate they are system claims that conform to the subject matter of independent Claim 36. Claim 37 was amended to indicate the "implantable delivery means is a catheter." Claim 40 was amended to indicate the "supply of genetic material is sufficient to supply a bolus of said genetic material to said selected location." In view of the submitted Amendment to Claims 37 and 40, Applicants respectively request the present rejection under 35 U.S.C. 112, second paragraph, be removed.

(3) In regards to Claims 37-46, the claims are dependent on cancelled claims. The Examiner has considered all claims to be dependent from Claim 36.

Applicants have amended all dependent claims to be either directly dependent to Claim 36 or to depend from another claim dependent on Claim 36. In view of the submitted Amendment to Claims 37-46, Applicants respectively request the present rejection under 35 U.S.C. 112, second paragraph, be removed.

(4) In regards to Claims 39 and 46, the helical screw element and pacing electrode are lacking a connection to the other claimed elements. A system claim may not be a listing of parts.

Claims 39 and 46 were amended to clearly indicate their relationship to the claimed system found in independent Claim 36. Claim 39 was amended respectively to indicate that the catheter system further comprises a hollow helical screw-in element. Claim 46 was amended to indicate the system of Claim 36 further contains an implantable pacing electrode for detecting cardiac signals which results from delivering said supply of said genetic material or protein to said selected location in said patient's heart. In view of the submitted Amendment to Claims 39 and 46, Applicants respectively request the present rejection under 35 U.S.C. 112, second paragraph, be removed.

(5) In regards to claim 44, the Examiner found it was unclear what element is performing the function of "improve[ing] the ability to sense."

Applicants have amended Claim 44 to specifically indicate that it is the genetic material or protein that improves the ability to sense the cardiac signal of said patient's heart. In view of the submitted Amendment to Claim 44, Applicants respectively request the present rejection under 35 U.S.C. 112, second paragraph, be removed.

**(2) Claim Rejections under 35 USC § 102**

Claims **49-62** were rejected under 35 U.S.C §102(b) as being clearly anticipated by Stokes et al. (U.S. Patent 6,567,705, hereinafter Stokes '705).

The present application, U.S. Serial No. 10/685,237 filed 10/14/2003, claims priority to U.S. Serial No. 09/896,994, filed 07/02/2001, now USPN 6,665,563. U.S. Serial No. 09/896,994, filed 07/02/2001, now USPN 6,665,563 is a continuation of U.S. Serial No. 09/514,907, filed 02/28/2000, now USPN 6,567,705, which is a continuation of U.S. Serial No. 08/682,433, filed July 17, 1996, now abandoned. Applicants have submitted and requested the full claim of priority be entered. Applicants also have delineated the priority claim in the attached illustration of U.S. prosecution history on the subsequent page.

It should be pointed out that there are two other related cases which exist that are related to the present case. They are U.S. Serial No. 09/896,995, filed 07/02/2001, now USPN 6,801,805, and a continuation of that case which is U.S. Serial No. 10/852,840, filed 5/26/2004. These are also illustrated on the subsequent page.

Applicants submit that in view of the Applicants priority to July 17, 1996 the Examiner has made an improper rejection under 35 USC § 102. The Examiner is citing the Darvish et al (US 7,190,997) which claims priority to provisional application No. 60/137,553, filed on June 4, 1999. These facts are also available on the USPTO's PAIR web site.

In view of the '705 is a improper reference, the Applicants respectfully request the present rejection be removed.

**Claim Rejections under 35 USC § 103**

Claims 49-62 were rejected under 35 U.S.C §103 as being clearly obvious by Stokes et al. (U.S. Patent 6,567,705, hereinafter Stokes '705).

The present application, U.S. Serial No. 10/685,237 filed 10/14/2003, claims priority to U.S. Serial No. 09/896,994, filed 07/02/2001, now USPN 6,665,563. U.S. Serial No. 09/896,994, filed 07/02/2001, now USPN 6,665,563 is a continuation of U.S. Serial No. 09/514,907, filed 02/28/2000, now USPN 6,567,705, which is a continuation of U.S. Serial No. 08/682,433, filed July 17, 1996, now abandoned. Applicants have submitted and requested the full claim of priority be entered. Applicants also have delineated the priority claim in the attached illustration of U.S. prosecution history on the subsequent page.

It should be pointed out that there are two other related cases which exist that are related to the present case. They are U.S. Serial No. 09/896,995, filed 07/02/2001, now USPN 6,801,805, and a continuation of that case which is U.S. Serial No. 10/852,840, filed 5/26/2004. These are also illustrated on the subsequent page.

Applicants submit that in view of the Applicants priority to July 17, 1996 the Examiner has made an improper rejection under 35 USC § 103. The Examiner is citing Stokes et al (US 6,567,705) which is the parent application of the present application, both of which claim priority to USSN 08/682,433 filed 07/17/1996 (see illustration of U.S. prosecution history on the subsequent page). These facts are also available on the USPTO's PAIR web site.

In view of the US 6,567,705 is an improper reference, the Applicants respectfully request the present rejection be removed.

**Double Patenting Rejection**

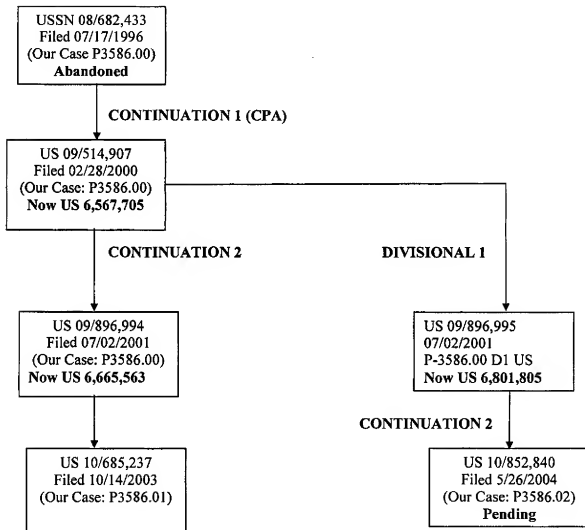
Claims 49-62 were rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 31-42 of U.S. Patent No. 6,801,805. Although the conflicting claims are not identical, they were indicated not to be patentably distinct from each other because improving the cardiac conduction signal would be an obvious means of improving the signal-to-noise ratio of the cardiac signal. Additionally, an ion channel protein would obviously or inherently increase expression of the ion channels in cells to which the protein/agent is applied.

Applicants submit herewith a terminal disclaimer of U.S. Patent No. 6,801,805. In view of the submitted disclaimer, applicants respectively request the present rejection to be removed.

**P-3586 FAMILY HISTORY  
SYSTEM AND METHOD FOR ENHANCING CARDIAC SIGNAL SENSING BY  
CARDIAC PACEMAKERS THROUGH GENETIC TREATMENT**

**Inventor: Stokes, Kenneth B.**

**Inventor: Morissette, Josee**

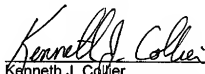


**Summary**

In view of the submitted amendment to the specification indicating the prior history of the application overcoming the prior art references, the amendments to the claims overcoming the § 112 objections, and the submitted terminal disclaimer to cure the obvious type double patenting rejections, Applicants respectfully request the present claims be allowed to issue.

Respectfully submitted,

10-15-07  
Date

  
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